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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,344	03/09/2004	Yuichiro Ohta	2803.70023	1978

7590 01/12/2007

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EXAMINER	
LUND, JEFFRIE ROBERT	
ART UNIT	**PAPER NUMBER**
1763	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/796,344	OHTA, YUICHIRO	
	Examiner	Art Unit	
	Jeffrie R. Lund	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicants Admitted Prior Art (AAPA) in view of Sweeny US Patent 1,559,804.

The AAPA discloses vacuum bonding chambers 16 for bonding liquid crystal display devices that include vacuum pumps 18 attached to the bonding chamber 16 by a flexible pipe 36. The vacuum bonding chamber and vacuum pump are mounted on a floor panel. (Page 2 lines 20-33, Figure 8)

The disclosed prior art does not teach a mechanism, specifically, a coupling bar

attached to the vacuum pumps near the flexible pipe and the floor panel to reduce the shrinking.

Sweeny teaches a mount for supporting a flexible hose that prevents damage to vacuum inlet pipe (i.e. elbow 11 and hose coupling 27) caused by tensile forces acting on the vacuum, the vacuum includes: a flexible pipe 16 attached to the vacuum by the vacuum inlet pipe (i.e. elbow 11 and hose coupling 27), coupling members (i.e. support rods 18, 18', 22, 24) connected between the vacuum inlet pipe (i.e. elbow 11 and hose coupling 27) and a floor panel (i.e. truck 23) in a direction in which the flexible pipe extends. (See figures 1 and 1a).

The motivation for supporting the vacuum inlet pipe is to keep all the components in place and to prevent damage from forces placed on the vacuum inlet pipe so that the vacuum inlet pipe will function as required and not be damaged in use as taught by Sweeny.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to support the vacuum inlet pipes in the apparatus of the AAPA to prevent movement and damage caused by forces applied to the vacuum inlet pipe as taught by Sweeny.

4. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Sweeny as applied to claims 1-8, and 10 above, and further in view of Elliotte, US Patent 2,663,894.

AAPA and Sweeny differ from the present invention in that they do not teach that the coupling member is a chain with a fixing block.

Elliotte teaches supporting the flexible hose 59 with sturdy beams 62 and chains 106 attached to fixing blocks 105 (see figure 1). It is also well known in the art that a load can be supported with a chain in tension.

The motivation for replacing a ridged rod of AAPA and Sweeny with a chain and fixing block as taught by Elliotte is to provide an alternate method of supporting a load.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to support the vacuum inlet pipes in the apparatus of the AAPA and Sweeny using a chain and fixing block as taught by Elliotte.

Response to Arguments

5. Applicant's arguments filed October 3, 2006 have been fully considered but they are not persuasive.

In regard to the argument:

> Applicants respectfully traverse the Examiner's statement that the truck 23 is a floor panel. The truck 23 of Sweeny is not a floor panel on which the vacuum pump is placed, but is instead merely a base of the vacuum pump. As shown in FIG. 1 and described on page 3, lines 29-36 of Sweeny, the truck 23 has wheels 35 and 37 which allow the truck 23 to move.
>
> Accordingly, assuming *arguendo* that the proposed combination of the Examiner is possible, the combination of the AAPA and Sweeny would not be able to achieve the advantages of the present invention because even if the air hose 16 of Sweeny is connected to the vacuum chamber 16 described in FIG. 8 of the present application (i.e., the AAPA) so that the vacuum chamber is evacuated through the air hose 16 of Sweeny, the shrinkage of the air hose 16 (i.e., flexible tube) can not be avoided at the time of evacuation because the cleaner (i.e., vacuum pump) of Sweeny is moveable. For this reason, Applicant respectfully requests withdrawal of the §103(a) rejection of claims 1-7 and 10.

The Examiner disagrees for the following reasons:

1) The AAPA discloses that the vacuum chamber and the vacuum pump are mounted on a floor panel.

2) The truck 23 of Sweeny is not a floor element as envisioned by the claims, however, it has the same function as the floor panel in the AAPA, specifically, to support

the vacuum pump. The coupling members (support rods 18, 18', 22, 24) are attached to the inlet pipe (elbow 11 and hose coupling 27) and the truck 23 to prevent movement of the inlet pipe.

3) The movement of the truck (i.e. across the floor) is not germane to the present situation because the present problem being solved is preventing movement of the inlet pipe. Sweeny is used only to teach the use of coupling members to prevent the movement of the inlet pipe. No suggestion has been made to replace the vacuum pump of the AAPA with the vacuum pump of Sweeny.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
1/6/07